

Remarks

The Examiner objected to the drawings both because of the smudged reference numerals and lack of a reference sign "B".

Formal drawings are enclosed herewith to remedy and "smudges". Furthermore the disclosure has been amended on page five at line 15 to change "arrows B" to -- arrow C -- to be consistent with the drawings.

The Examiner objected to the use of two spelling variance for "leveling" on page 4. This has been corrected.

The Examiner objected to claim 10 as lacking a period. Amended claim 10 corrects this informality.

The Examiner rejected claims 1, 3, 4 and 7 as being anticipated by US Patent No. 4,860,510 to Kotler.

Unlike the present invention, Kotler discloses an open grid 11 for supporting a cushion plate 10 which may be adhered to the grid. As the grid 11 is not imperforate or moisture impervious, it wouldn't satisfy the requirement of being "a waterproof sheet material" as set out in claim 1. Applicant however does appreciate that the Examiner may be extending the definition of "waterproof sheet" to include a grid layer where the material of the grid is waterproof yet the grid itself doesn't act as a moisture barrier. Applicant has amended claim 1 to make it more clear that the waterproof sheet is imperforate.

To further clarify the amendment, Applicant points out that a Kotler type grid (11) would be unsuitable for random waferboard or any other wood base flooring panels as they would enable underlying moisture access to the panel which would cause unacceptable warpage and rot.

Another difference between the Kotler reference and the invention of claim 1 is that the connectors utilized for the Kotler structure are basically hook and

loop arrangements whereby only movement in a lateral direction is constrained and not movement within a vertical direction. This would be unsuitable as an underflooring because it would cause shifting and damage to the overflooring particularly if a tile floor were to be installed over the sub-floor.

Claims 3, 4 and 7 depend from claim 1 and accordingly the above structural differences distinguish claims 3, 4 and 7 from Kotler as well.

The Examiner states that claims 2,5, 6, 8, 9, 11 and 12 are obvious in view of Kotler and US Patent No. 3,902,293 to Witt et al. Applicant respectfully submits that there is no combination of Witt and Kotler which would yield a panel according to Applicant's invention, as defined in the amended claims.

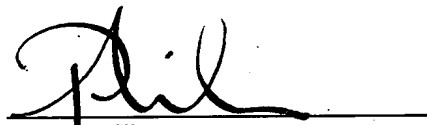
The Kotler structure, as discussed above, uses an open grid to support its upper layer. This is not a moisture impervious arrangement and accordingly will allow moisture access to the overlying waferboard.

The Witt structure uses a bottom layer (11) consisting of a molded sheet of a network of a compressed gas-containing fibres or filaments. The passage referred to by the Examiner in column 3 characterizes the bottom layer as having "an abundance of generally horizontal paths for moisture diffusion because the resilient layer is a molded tangled web of fibres (schematically shown in Fig. 6) through which gas streams readily flow". Applicant notes that Witt does not refer to drainage of moisture as a liquid but rather to diffusion of moisture as a gas. Accordingly the structure in Witt must be porous and furthermore Witt lacks a plurality of knob-like projections as a tangled web of fibres will cause moisture to collect rather than promote drainage. As neither Kotler nor Witt disclose a substantial rigid lower member of a non-porous sheet material having a plurality of knob-like projections about which moisture may drain, there is no combination, obvious or otherwise of Kotler and Witt which would yield Applicant's invention. Applicant therefore respectfully submits that claims 2, 5, 6, 8, 9, 11 and 12 cannot be obvious in view of Kotler and Witt.

Applicant has further amended claim 1 in line 4 to specify that the projections are "knob-like". The reason for this amendment is to make it clear that moisture can flow about the projections, which, in the case of a basement would allow moisture to flow toward a drain. Were the projections channel-like rather than knob-like, moisture might get trapped rather than flow. Applicant respectfully submits that the "knob-like" projections finds support in finds support in the drawings and in the description on page 4 commencing at line 11.

For all the reasons set out above, Applicant respectfully submits that the application as amended distinguishes patentably over the cited art and accordingly allowance of the application is requested.

Respectfully submitted,



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MARKED-UP TEXT SHOWING AMENDMENTS
SET OUT IN RESPONSE DATED JULY 26, 2002

U.S. PATENT APPLICATION NO. 09/809,307

Page 4, line 11:

Turning now to Figure 4, the projections 16 extend away from the lower member 14 in the opposite direction to the upper member 12. The projections 16 are frustoconical shaped with a bottom surface 24 and a cavity 26 extending from the bottom surface 24 towards the upper member 12.

Preferably the projections 16 are aligned in rows and columns to enable the floor panels 10 to be cut between the projections 16 without leaving any half-cut projections 16. When the floor panel 10 is installed, the bottom surface 24 of the projections 16 is located adjacent the underlying surface 11. In some applications further levelling of the floor panels 10 may be required if the underlying surface 11 is uneven. This can be achieved by stacking additional layers of the lower member 14 under the lower member 14 on the floor panel 10 in the areas where raising is required. The additional layers of the lower member 14 can be sized to fit the area that requires further [leveling] levelling.

Page 5, line 14:

To install the floor panels 10 that use a key and groove arrangement, the key 30 must first be inserted into the second groove 28 in the direction shown by [arrows B] arrow C in Figure 8. Once the key 30 is installed the floor panel 10 is inserted into the second groove 28 on an adjacent floor panel 10, in the direction shown by arrow C in Figure 8. Similarly, adjacent panels are interconnected until the required sub-floor coverage is achieved.

Claims

1. A flooring panel which provides underfloor drainage, the flooring panel comprising:
 - an upper member of sheet flooring material;
 - a substantially rigid lower member, attached to the upper member and
 - of [a] non-porous waterproof sheet material having a plurality of knob-¹¹²
like projections extending away from the upper member to support the

flooring panel above an underlying surface and permit moisture to drain about the projections and between the flooring panel and the underlying surface; and
at least one part of a connector assembly for connecting adjacent edges of adjacent of said panels to prevent relative vertical movement therebetween.

10. A flooring panel according to claim 1, wherein the connector assembly comprises at least one key and at least one groove.

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